[illegible] [illegible]

[illegible] [illegible]

[illegible]

1 [illegible]

2 [illegible]

[illegible]

3 [illegible]“[illegible]”[illegible]

[illegible]

[illegible]

1 [illegible] — [illegible]

2 [illegible] ([illegible]) [illegible]

[illegible]. [illegible] $2SO_2\,(g) + O_2\,(g) \rightleftharpoons 2SO_3\,(g)$

[illegible]

①. [illegible]; [illegible]

②. [illegible] ; [illegible]

③. [illegible]; [illegible]

④. [illegible] O_2; [illegible]

⑤. [illegible] N_2; [illegible]

⑥. [illegible] N_2 [illegible]

□□1. □H_2SO_4□□□Zn□□□□□□□□□□□□H_2□□□□□□

□　　　□　　　**CD**

A. Na_2CO_3 (s)　　　B. $(NH_4)_2SO_4$ (S)

C. K_2SO_4 (aq)　　　D. H_2O (l)

2□□□□4□X□□□□□□□□4□□□10mL 2mol/L□□□□□□□□□□□□□□50mL□□□X□□□□□□□□□□□□□□□□□□□□□□□

□　　　□　　　**A**

A□20mL 3mol/L□X□□　　　B. 20mL 2mol/L□X□□

C□10ml 4mol/L□X□□　　　D. 10mL 2mol/L□X□□

[illegible] [illegible] P_{2-4} [illegible]

1 [illegible] [illegible]

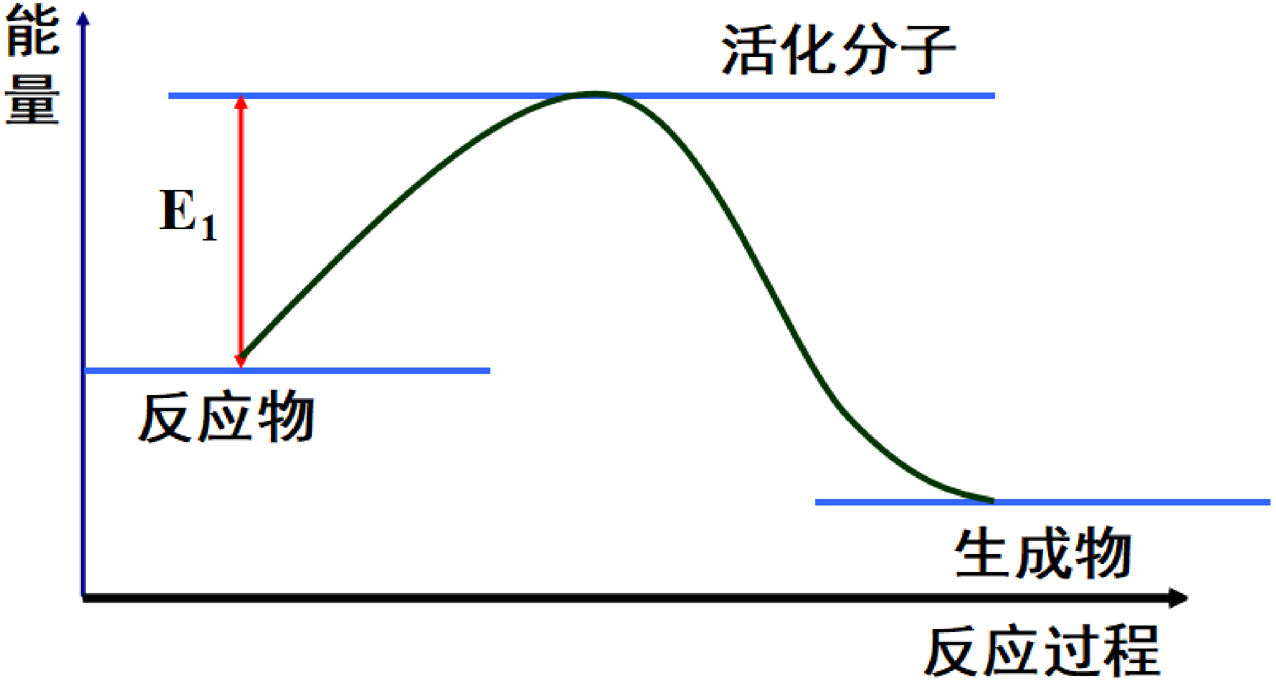
[illegible] a. [illegible]

b. [illegible]

2 [illegible] [illegible]

[illegible]

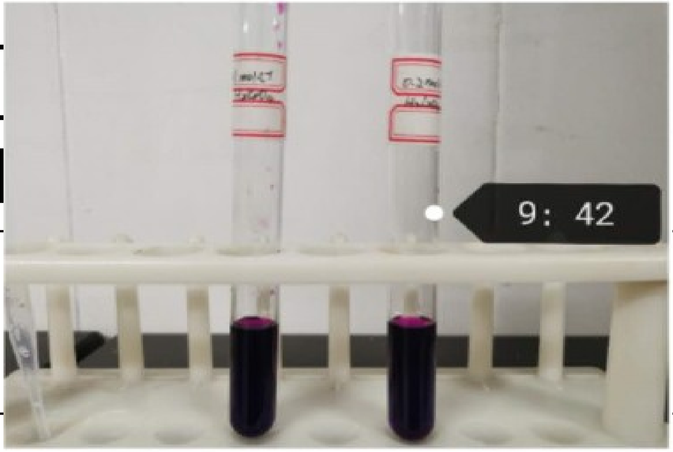
3 [illegible] [illegible]

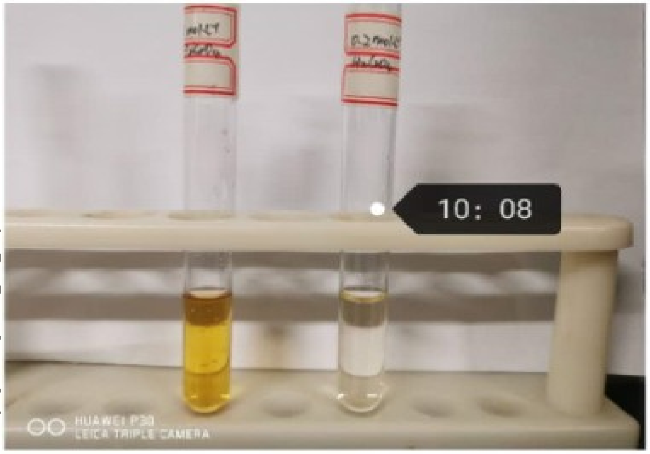


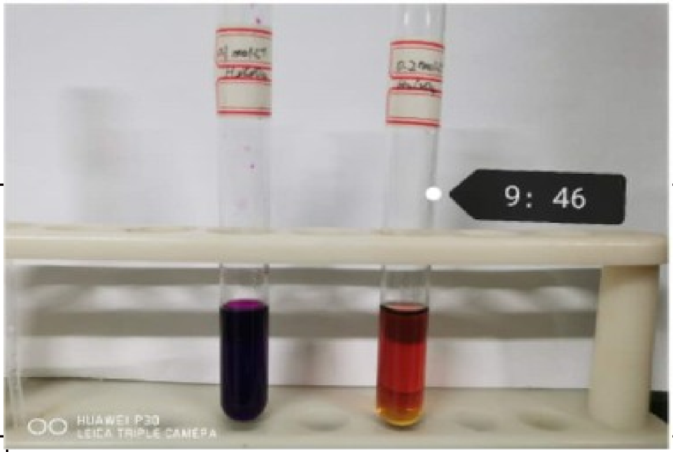
(%) $= \dfrac{(n)}{(n)} \times 100\%$

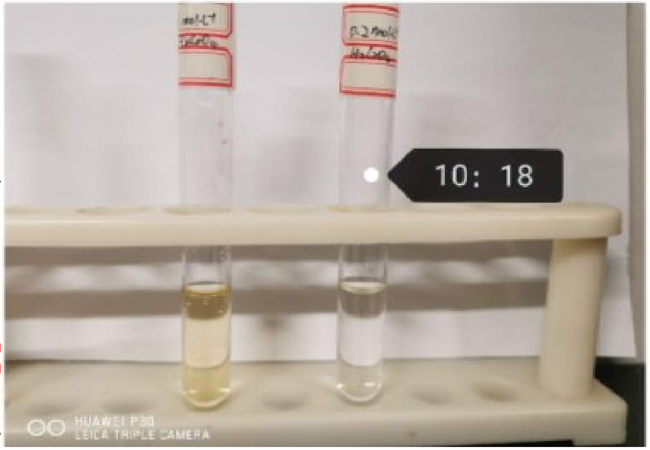
[illegible]

1









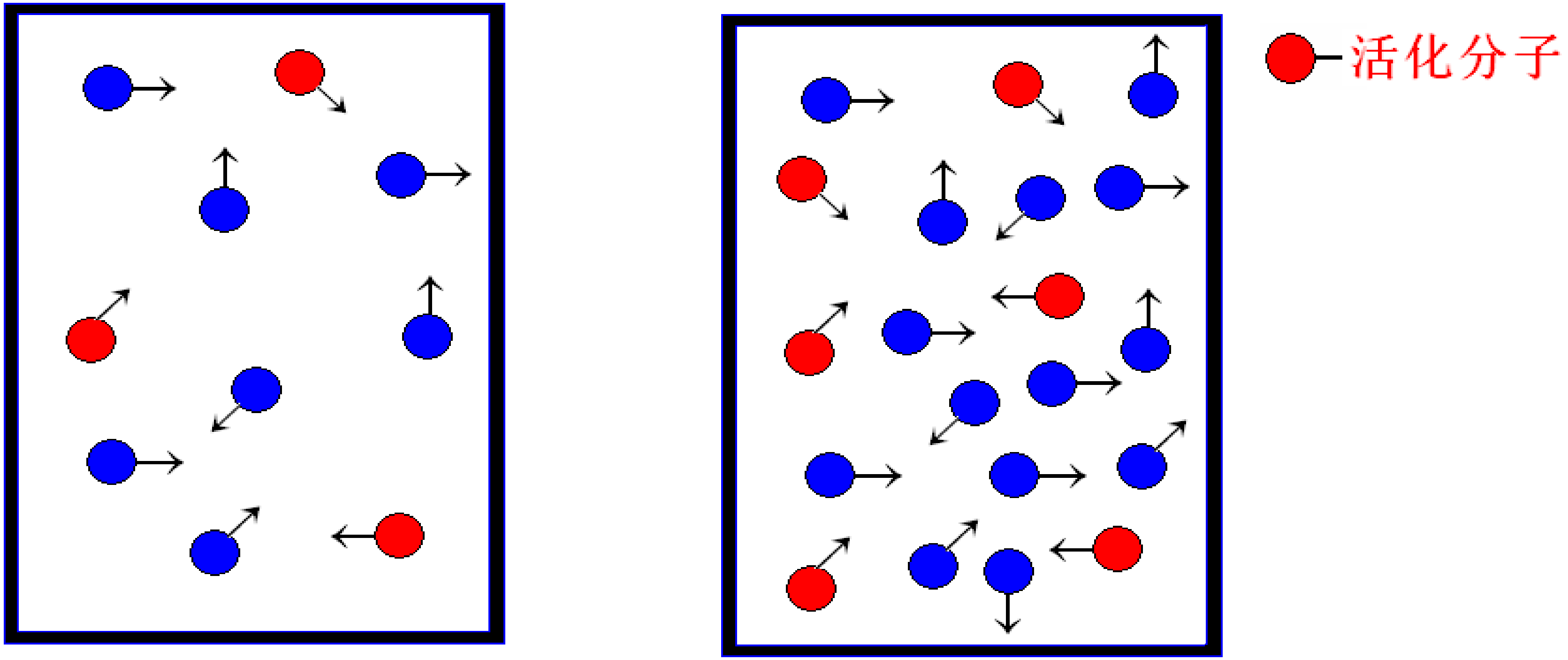
[illegible]	$3H_2SC$ … O_4 $CO_2\uparrow$ [	
[illegible]		
[illegible]		k
[illegible]	[illegible]	[illegible] $0.1\ mol\cdot L^{-1}$ $H_2C_2O_4$ [illegible]
[illegible]	[illegible]	

n

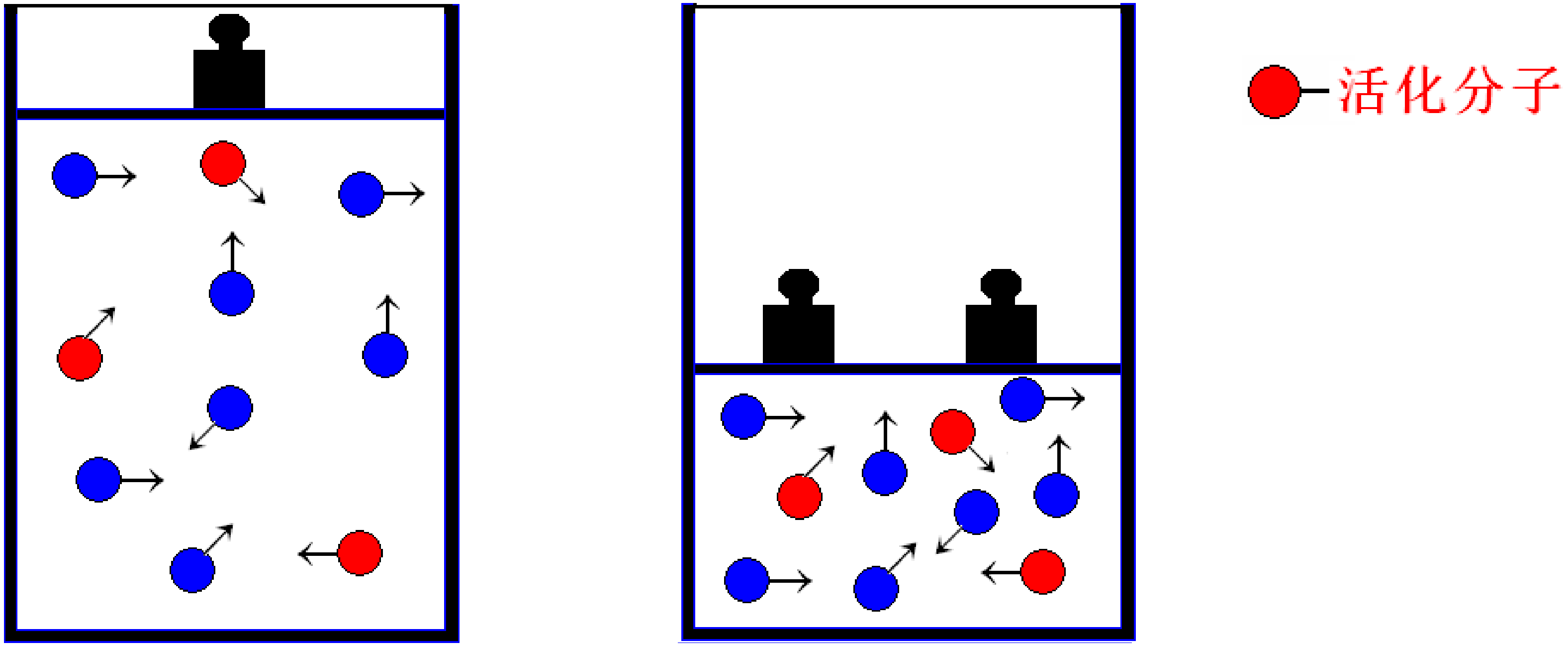
n

%

n



2



[illegible] 1. [illegible] $C(s)+H_2O(g)=CO(g)+H_2(g)$ [illegible]

[illegible] (　　　)

A. [illegible] C [illegible]

B. [illegible]

C. [illegible] N_2 [illegible]

D. [illegible] N_2 [illegible]

AC

[illegible]①[illegible]

[illegible] 2. [illegible] $FeCl_3$ [illegible] 3KSCN $\rightleftharpoons$ $Fe(SCN)_3$ [illegible] 3KCl [illegible]

[illegible] $FeCl_3$ [illegible] KCl [illegible]

[illegible]②[illegible] Fe^{3}[illegible][illegible] 3SCN[illegible] $\rightleftharpoons$ $Fe(SCN)_3$

3 [illegible]

[illegible] 2—3 [illegible]

[illegible]	$Na_2S_2O_3$ [illegible] H_2SO_4 === Na_2SO_4 [illegible] SO_2↑ [illegible] S↓ [illegible] H_2O
[illegible]	
[illegible]	[illegible] 70 ℃ [illegible]
[illegible]	[illegible]

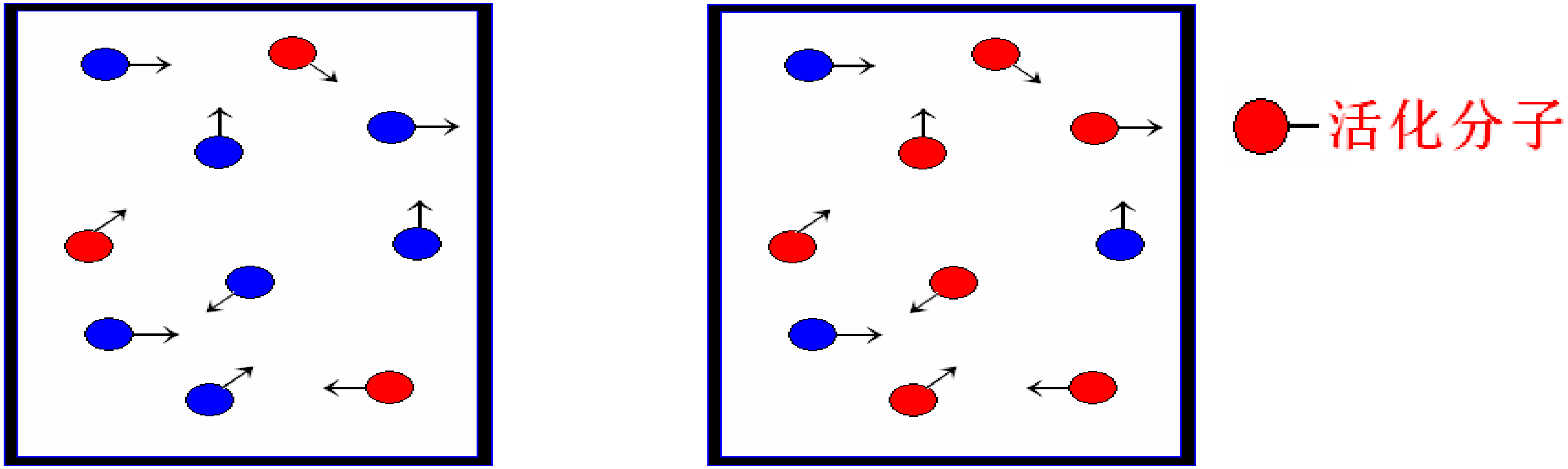
[illegible]

[illegible]

T↑ [illegible] %↑

[illegible] n [illegible]

[illegible]

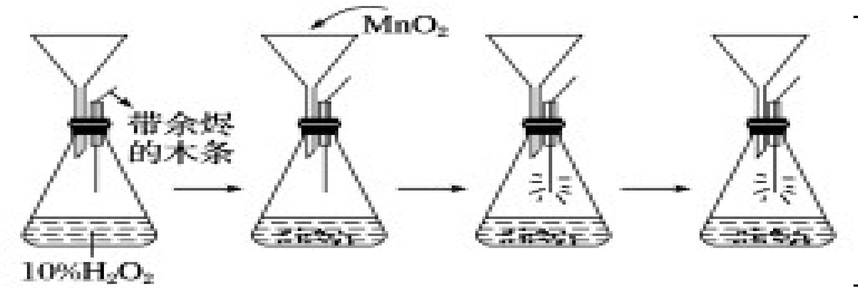


(1) [illegible]

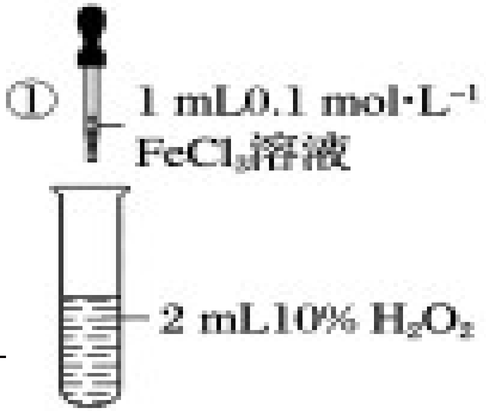
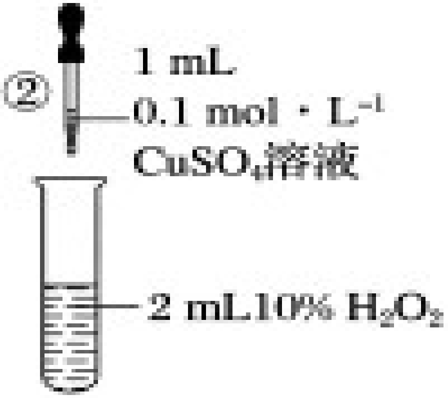
(2) [illegible] 10°C [illegible] 2 [illegible] 4 [illegible]

4 [illegible]

[illegible][illegible] 2—4 [illegible]

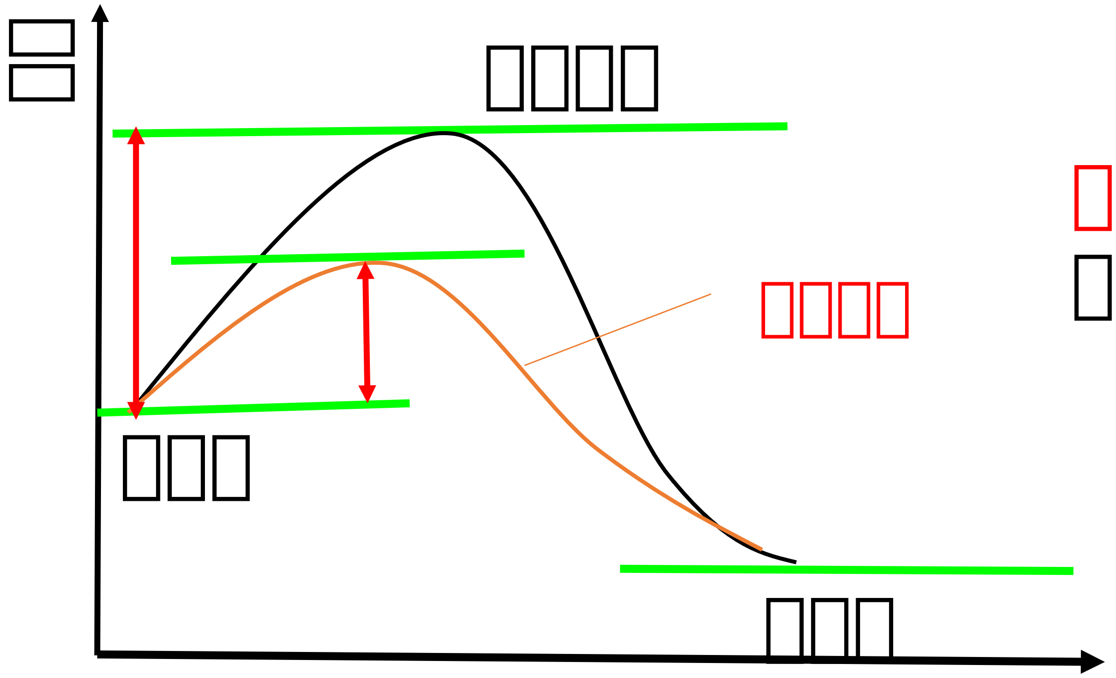
[illegible]	$$2H_2O_2 \xlongequal{MnO_2} 2H_2O + O_2\uparrow$$
[illegible]	
[illegible]	① [illegible] MnO_2 [illegible]② [illegible] MnO_2 [illegible]
[illegible]	MnO_2 [illegible] H_2O_2 [illegible]

□□□□□□□□□□“□□□□” 1 □□□□

□□	$2H_2O_2 = 2H_2O + O_2\uparrow$	
□□□□		
□□□□□□	□	□①□
□□	□□①□②□ Cu^{2+}□□ Fe^{3+}□□ H_2O_2 □□□□□□□□□□ Fe^{3+}□□□□□□□	

[illegible]

[illegible] → [illegible]%↑ → [illegible] **n** [illegible] → [illegible]



[illegible] ([illegible]) [illegible]
[illegible]

[illegible]

(1) [illegible];

(2) [illegible];

(3) [illegible]

[illegible]

5 [illegible]
[illegible]

[illegible]

[illegible] >> [illegible] > [illegible]≈[illegible] ([illegible])

[illegible]

[illegible]

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] *v* [illegible]
[illegible]	↑	[illegible]	↑	↑	↑
[illegible] ([illegible])	↑	[illegible]	↑	↑	↑
[illegible]	[illegible]	↑	↑	↑	↑
[illegible] ([illegible])	[illegible]	↑	↑	↑	↑

[illegible]

1. [illegible]

[illegible] **1** [illegible]

[illegible] **2** [illegible]

[illegible] **3** [illegible]

[illegible] **4** [illegible]

2 [illegible] [illegible] **D**

A. [illegible]

B. [illegible]

C. [illegible]

D. [illegible]

□□□□□□□□□□——“□□□□”□

□□□□□□□□□□□□□□□□□□□□□□□□□□ MnO_4^- □ $H_2C_2O_4$ □ $H^{□}$ → $Mn^{2□}$□ CO_2↑ □ H_2O(□□□) □□ 4 mL 0.001 mol/L $KMnO_4$ □□□ 2 mL 0.01 mol/L $H_2C_2O_4$ □□□□□□□□□□□□□□□□ □□□□□□□□□□□□□

组别	10%硫酸体积/mL	温度/℃	其他物质
I	2	20	—
II	2	20	10滴饱和$MnSO_4$溶液
III	2	30	—
IV	1	20	1 mL蒸馏水

(1) □□□□□□□□□□□□□□□□□□□□□□□□ ___ □ ____ (□I□IV□□□□ II I

□) □□□□□□□□□□□□□□□□□□□□□□□□ ____ □ ____ □ I III

(2) □□□□□I□IV□□□□ ______ c(H□)(□□□□□□□□□□)

□□□□□□□□□□□□□□IV□□□ 1 mL □□□□□□□

______ □□□□□□□ **c($KMnO_4$)** □ **c($H_2C_2O_4$)** □□□□□□□□□□

□

[illegible]2014·[illegible] H_2O_2 [illegible]

[illegible] 1 [illegible] Fe^{3+} [illegible] **H_2O_2** [illegible] **H_2O_2** [illegible] 30% H_2O_2 [illegible] 0.1mol•L^{-1} $Fe_2(SO_4)_3$ [illegible]

① [illegible] **H_2O_2** [illegible]

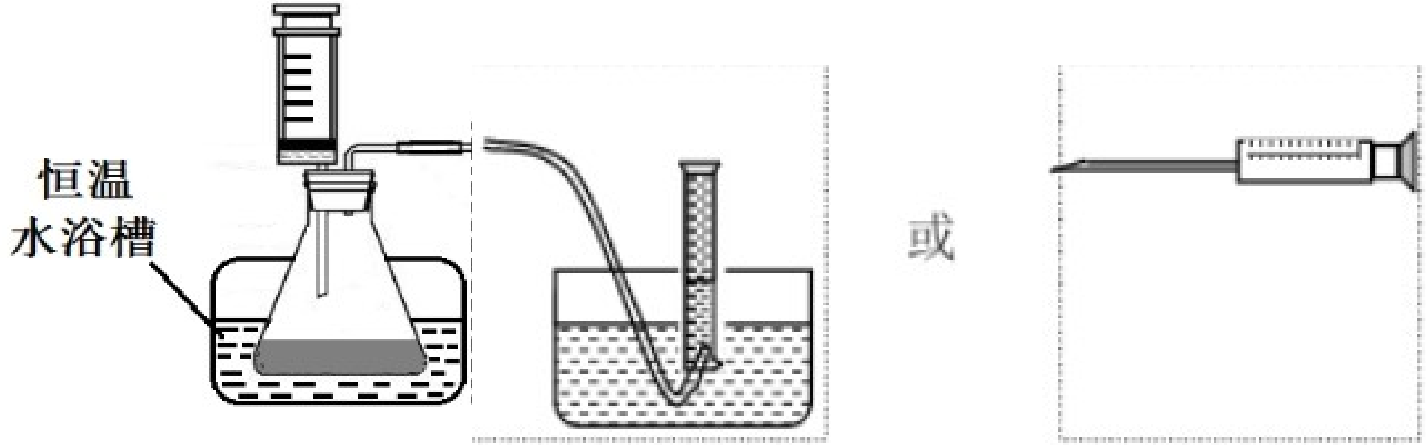
____

② [illegible] **H_2O_2** [illegible] ____________ __________________ [illegible]

[illegible]

【2014·[illegible] H_2O_2 [illegible]
[illegible] 1 [illegible] Fe^{3+} [illegible] **H_2O_2** [illegible] **H_2O_2** [illegible]
[illegible] 30% H_2O_2 [illegible] 0.1mol•L^{-1} $Fe_2(SO_4)_3$ [illegible]
[illegible]

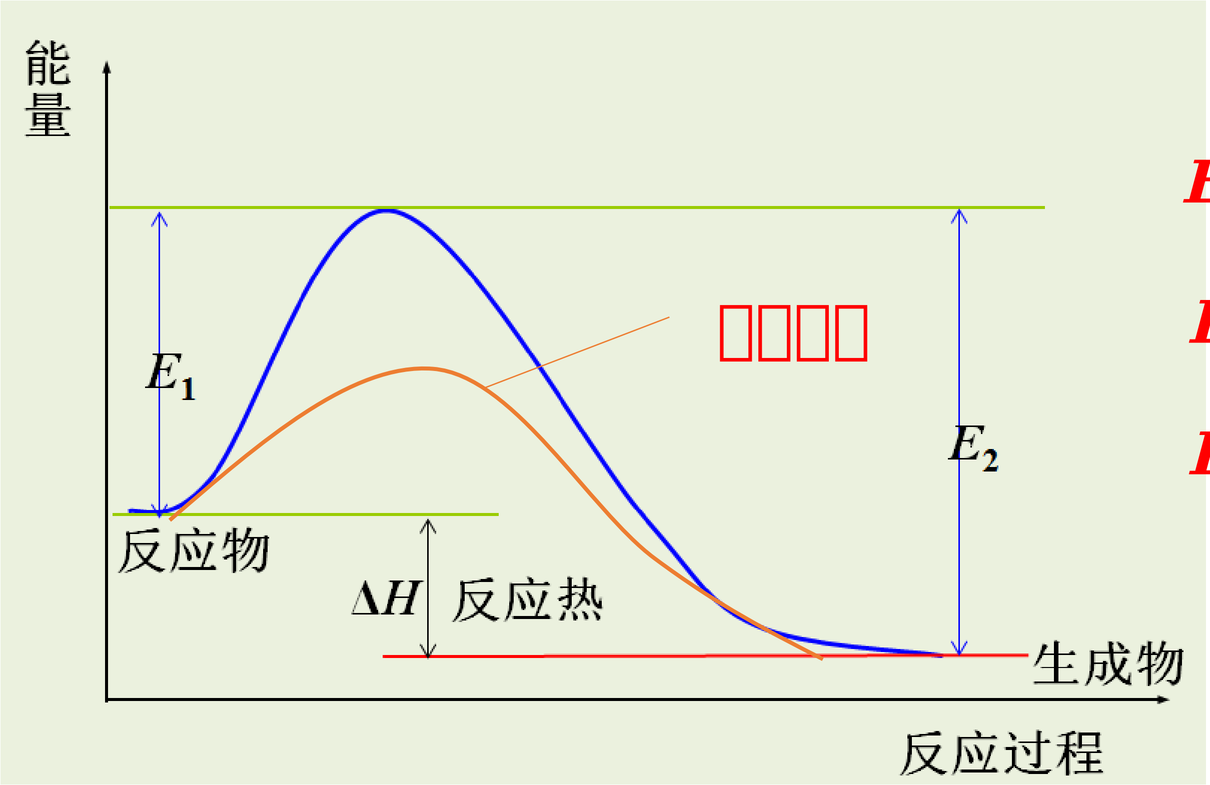
③ [illegible]



[illegible]2014·[illegible] H_2O_2 [illegible]
[illegible] 1 [illegible] Fe^{3+} [illegible] **H_2O_2** [illegible] **H_2O_2** [illegible]
[illegible] 30% H_2O_2 [illegible] 0.1mol•L^{-1} $Fe_2(SO_4)_3$ [illegible]
[illegible]

④ [illegible]
[illegible]
[illegible]

	V[0.1mol•L^{-1} $Fe_2(SO_4)_3$] /mL	V[30% H_2O_2] /mL	V[H_2O] /mL	V[O_2]/mL	[illegible] d mL O_2 [illegible] t/s
1	a	b	c	d	t_1
2	a	c	b	d	t_2



E_1 [illegible]

E_2 [illegible]

E_1-E_2 [illegible]